

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/051573

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 F16L23/036 F16L37/12

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F16L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|------------|--|-----------------------|
| X          | DE 28 33 866 A (MANNESEMANN AG)<br>14 February 1980 (1980-02-14)<br>claims 1,3<br>figure 1<br>page 3, paragraph 1<br>page 4, paragraph 6<br>page 5, paragraph 1<br>page 5, paragraph 3 - page 6, paragraph 1 | 1-3                   |
| X          | DE 90 977 C (THE VACUUM BRAKE COMPANY LTD.) 8 April 1897 (1897-04-08)<br>claim 1<br>figures 1-3<br>page 1  | 1                     |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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- \* & \* document member of the same patent family

Date of the actual completion of the international search

19 October 2004

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02/11/2004

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| A          | <p>DE 43 18 831 A (PUTZMEISTER MASCHF)<br/>             8 December 1994 (1994-12-08)<br/>             claims 1,7<br/>             figure 2<br/>             column 1, line 3 - line 12<br/>             column 2, line 25 - line 31<br/>             column 2, line 65 - column 3, line 9</p> | 1-3                   |

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| Patent document<br>cited in search report |   | Publication<br>date | Patent family<br>member(s) |            | Publication<br>date |
|---|---|---------------------|----------------------------|------------|---------------------|
| DE 2833866                                | A | 14-02-1980          | DE                         | 2833866 A1 | 14-02-1980          |
| DE 90977                                  | C |                     | NONE                       |            |                     |
| DE 4318831                                | A | 08-12-1994          | DE                         | 4318831 A1 | 08-12-1994          |